End-User’s Disconfirmed Expectations and the Success of Information Systems

KUNSOO SUH
Kia Economic Research Institute

SANGHOON KIM
Kwangwoon University

JINJOO LEE
Korea Advanced Institute of Science and Technology

Noting considerable alienation or dissatisfaction on the part of computer users, MIS literature has looked at a variety of social science techniques, including consumer satisfaction theory, for solutions to these problems. The dominant model of consumer satisfaction and dissatisfaction has been based on the disconfirmation of expectations paradigm. However, a critique of the disconfirmation of expectations model shows that using predictive expectation as a comparison standard reveals a number of conceptual and empirical problems. To overcome these problems, this paper suggests desired expectations as an alternative comparison standard. This paper proposes a desired expectations model of end-user computing (EUC) success that describes that the success of EUC be determined by the discrepancy between end-user desires and actual performance of information systems. Analysis of data from 150 end-users in Korean business firms shows that attitudinal measures of EUC success (i.e., overall user satisfaction and perceived usefulness) were significantly influenced by the level of discrepancy. This empirical result supports the assumption that the success of EUC depends on how end-users perceive the actual performance of information systems in the context of what they want.

It is commonly believed that information technology offers a substantial potential for improving end-users’ performance. However, people’s unwillingness to use available systems (Davis, 1989; Igbaria, 1993) and considerable alienation or dissatisfaction of end-users often turn technically-successful systems into failures (Doll and Torkzadeh, 1989). These problems have been a major impetus for seeking a variety of social science theory, including consumer satisfaction theories, for resolving these problems.

The construct ‘disconfirmed expectations’ (i.e., the discrepancy between expectation and actual product performance) in the consumer satisfaction literature has been broadly accepted as one of the key determinants of consumer satisfaction (Oliver, 1989; Stayman et al., 1992). Hence one would speculate the same relationship should be held for the information consumer, end-users. However, the influence of end-users’ disconfirmed expectation on the success of information systems (often measured by end-user satisfaction and system use) has received little research attention in the MIS research area. The importance of user expectations on the success of an information system can be found in MIS research. For example, Edmundson and Jeffery (1984) investigated the relationship between the performance of information requirements determination and post-implementation satisfaction with the software acquired. The authors concluded that end-user expectations about the information system play a significant role in determining user satisfaction. The purpose of this paper is to empirically investigate the impact of end-users’ disconfirmed expectations on the success of end-user computing (EUC). We first identify unique aspects of the end-user computing environ-
ment and describe the construct of disconfirmed expectations appropriate for this context. In this paper, the disconfirmed expectations concept is defined as the gap between desired and actual levels of IS performance, including information quality and system’s interface quality. After establishing the end-user’s disconfirmed expectations model, research hypotheses are derived and empirically examined.

Background

Influencing factors of end-user computing success

End-user computing (EUC) refers to direct interaction with application software by managerial, professional, and operational level personnel in user departments (Doll and Torkzadeh, 1989). The dependent variable in many EUC studies is EUC success. Measures for it include end-user satisfaction (Doll and Torkzadeh, 1988), information system use (Ghani, 1992), and perceived usefulness of the information system (Davis, 1989).

A close examination of the existing EUC literature reveals that EUC phenomena have been characterized by the following two dimensions: information consumption and direct user interaction. These two dimensions are closely linked to the definition of end-users in that they are defined as those users who consume information through direct interaction with application systems (Doll and Torkzadeh, 1989). From this vantage point, the performance of end-user information systems includes both information quality and interface quality.

The quality of information is typically evaluated by measuring information attributes. For example, in their efforts to develop a measure of information quality in the context of EUC, Doll and Torkzadeh (1988) developed a measure that included content, accuracy, relevancy, format, and timeliness of systems’ output. The information quality has been considered important because providing high quality information to users has been consistently viewed as a key determinant of user acceptance (Davis, 1989).

The quality of the interface has also been regarded as a primal factor of EUC success. The importance of the interface may matter more to end-users than traditional DP users who use IS indirectly by other people (e.g., DP operator). That is, unlike DP users, end-users consume information primarily through their own interaction process, i.e., the interaction between the end-users and the computer system. The interface consists of hardware device (e.g., screens, keyboard), software, and other means (e.g., telecommunication facilities) by which the user exchanges inputs and outputs with the computer system. Since computer systems are operated directly by end-users - those who benefit from their outputs but may know very little about their internal aspects - a well-designed interface is critical to the success of a system. In contrast to the widely accepted notion that the performance of information systems (IS) is a prerequisite for IS use, previous research on the relationships revealed mixed results. For example, Mawhinney and Lederer (1990) found a strong relationship between IS performance and system usage (often employed as a measure of IS success), while Srinivasan (1985) found no significant relationship between them. One possible reason for the mixed findings may be due to difference in users’ expectation levels in various research contexts. For example, low level of usage could be observed because some important features of IS do not meet the users’ expectation level even when the performance of IS is high.

In this regard, determining a correct and complete set of user information needs is generally recognized to be one of the most critical factors to MIS success (Kim, 1989). However, there are some reasons for the difficulties in obtaining a correct and complete set of information needs. Davis and Olson (1985) summarized the reasons as follows: (1) the constraints on human as information processors, (2) the variety and complexity of information requirements, (3) the complex patterns of interaction among users and analysts, and (4) the unwillingness of some users to provide requirements for political and behavioral reasons. For these reasons, MIS development personnel or software vendors may not understand what features connote high quality information to users in advance. Thus, there could be a discrepancy between users expectations and features of a developed system, which in turn influences success of information systems (e.g., more satisfaction and active use by the users).

The importance of the disconfirmation of expectations has been well discussed in consumer satisfaction research (Oliver and DeSarbo, 1988; Spreng and Olshavsky, 1992). The disconfirmation of expectations theory suggests that the success of a product, measured by consumer satisfaction, is determined by the size and directions of one’s discrepancy between expectations and perceived product performance. Since this paper aims at studying the effect of the discrepancy between end-users’ expectations and IS performance on the success of EUC, this theory can be a useful reference.

The disconfirmed expectations model

In the consumer satisfaction literature, a number of studies have been conducted on the effect of disconfirmed expectations on consumer satisfaction. In the disconfirmation of expectations model, expectations have generally been included as the criterion by which performance is compared. The result of the cognitive comparison between pre-use expectations and post-use perception is called unfilled expectations, and the discrepancy between what is expected and what is received has been shown to be a predictor of
Related Content

A Time Series Analysis of International ICT Spillover
[www.igi-global.com/chapter/time-series-analysis-international-ict/22882?camid=4v1a](www.igi-global.com/chapter/time-series-analysis-international-ict/22882?camid=4v1a)

The Selection of the IT Platform: Enterprise System Implementation in the NZ Health Board
Maha Shakir and Dennis Viehland (2005). *Journal of Cases on Information Technology* (pp. 22-33).
[www.igi-global.com/article/selection-platform-enterprise-system-implementation/3137?camid=4v1a](www.igi-global.com/article/selection-platform-enterprise-system-implementation/3137?camid=4v1a)

B
[www.igi-global.com/chapter//119563?camid=4v1a](www.igi-global.com/chapter//119563?camid=4v1a)

Testing and Extending Theory in Strategic Information Systems Planning Through Literature Analysis
[www.igi-global.com/chapter/testing-extending-theory-strategic-information/4652?camid=4v1a](www.igi-global.com/chapter/testing-extending-theory-strategic-information/4652?camid=4v1a)